### **ENVIRONMENTAL CHEMISTS**

Date of Report: November 25, 1996
Date Received: November 21, 1996
Project: Metro Self Monitor, PO #55337

Date Samples Extracted: November 22, 1996 Date Extracts Analyzed: November 22, 1996

## RESULTS FROM THE ANALYSIS OF THE WATER SAMPLE FOR CHROMIUM, COPPER, NICKEL, AND ZINC USING METHOD 6010

# Samples Processed Using Method 3005A

Results Reported as mg/L (ppm)

Sample ID	<u>Chromium</u>	Copper	<u>Nickel</u>	Zinc
M55337	0.26	0.15	0.28	0.08
		Elizabilia.		
Method Blank	< 0.05	< 0.05	< 0.05	< 0.05

## **ENVIRONMENTAL CHEMISTS**

Date of Report: November 25, 1996 Date Received: November 21, 1996 Project: Metro Self Monitor, PO #55337

## QUALITY ASSURANCE RESULTS FOR TOTAL METALS BY INDUCTIVELY COUPLED PLASMA (ICP) (METHOD 6010)

Laboratory Code: 74137 (Duplicate)

Analyte:	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference	Acceptance Criteria
Chromium	mg/L (ppm)	0.26	0.27	4	0-20
Copper	mg/L (ppm)	0.15	0.15	·0a	0-20
Nickel	mg/L (ppm)	0.28	0.30	7	0-20
Zinc	mg/L (ppm)	0.08	0.08	0a	0-20

Laboratory Code: 74137 (Matrix Spike)

	Reporting	Spike	Sample	<b>%</b> ]	Recovery	Acceptance	Relative e Percent
Analyte:	Units	Level	Result	MS	MSD	Criteria	Difference
Chromium	mg/L (ppm)	5	0.26	100	96	80-120	4
Copper	mg/L (ppm)	5	0.15	100	95	80-120	5
Nickel	mg/L (ppm)	10	0.28	100	95	80-120	5
Zinc	mg/L (ppm)	5	0.08	101	97	80-120	4

Laboratory Code: Spike Blank

Analyte:	Reporting Units	Spike Level	% Recovery MS MSD	Acceptance Criteria	Relative Percent Difference
Chromium	mg/L (ppm)	5	99 100	80-120	
Copper	mg/L (ppm)	5	99 101	80-120	2
Nickel	mg/L (ppm)	10	100 100	80-120	0
Zinc	mg/L (ppm)	5	101 98	80-120	3

a - The analyte was detected at a level less than five times the detection limit. The RPD results may not provide reliable information on the variability of the analysis.

FRIEDMAN & BRUYA, INC. 3012 16th Avenue West Seattle, WA 98119-2029 (203) 285-8282

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# SAMPLE CHAIN OF CUSTODY

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### **ENVIRONMENTAL CHEMISTS**

James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

November 25, 1996

## INVOICE # 96ACU1125-1 DUPLICATE COPY

Accounts Payable Alaskan Copper Works 628 South Hanford Seattle, WA 98134

RE: Project Metro Self Monitor, PO #55337: Results of testing requested by Gerry Thompson, Project Manager for material submitted on November 21, 1996.

1 water sample analyzed for Chromium, Copper, Nickel, and Zinc using Method 6010 @ \$65 per sample \$ 65.00

Amount Due \$ 50.00

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James E. Bruya, Ph.D. Beth M. Albertson, M.S. Bradley T. Benson Kelley D. Wilt 3012 16th Avenue West Seattle, WA 98119-2029 TEL: (206) 285-8282 FAX: (206) 283-5044

November 25, 1996

Gerry Thompson, Project Manager Alaskan Copper Works 628 South Hanford Seattle, WA 98134

Dear Mr. Thompson:

Included are the results from the testing of material submitted on November 21, 1996 from your Metro Self Monitor, PO #55337 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Kurt Johnson

Chemist

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